Optica HD Indoor Dome Network Camera

Model: D224M

User's Manual

Ver. 1.3

Table of Contents

1. Overview 2

1.1 Features 2

1.2 Package Contents 3

1.3 Dimensions 4

1.4 Connectors 5

2. Camera Cabling 6

2.1 Connect Power 6

2.2 Connect Ethernet Cable 6

2.3 Connect Alarm I/O 6

3. System Requirements 7

4. Access Camera 8

5. Setup Video Resolution 12

6. Configuration Files Export / Import 13

Appendix A: Technical Specifications 14

Appendix B: Delete the Existing Optica Viewer 16

Appendix C: Setup Internet Security 17

Appendix D: Video Resolution 18

D224M - Quad Streams 18

D224M - Triple Streams 22

D224M - Dual Streams 25

D224M - Single Stream 26

1. Overview

The D224M HD Indoor Dome Network Camera is an easy setup camera with PoE supported to reduce complicate cabling. Up to 1080P Megapixel Resolution is offered for providing high definition images. Quad Streams Compression (H.264 Baseline / Main / High Profile + MJPEG) are supported for efficient bandwidth and storage management. For dark environments, the camera has incorporated WDR, 3DNR and Day/Night ICR technologies to capture clear images in lowlight conditions.

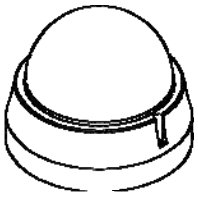
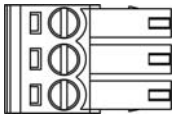
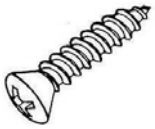
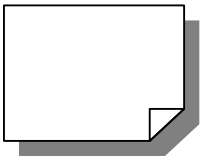
1.1 Features

- Progressive Scan CMOS Sensor
- 1080P Resolution
- Dual Streaming- Full HD 1080P Real Time + D1 Real Time
- Quad Streams Compression- H.264 Baseline / Main / High Profile + MJPEG
- Multi-language Support
- Tampering Alarm
- Wide Dynamic Range
- Motion Detection
- Privacy Masks
- Smart Picture Quality / 3D Noise Reduction
- Vertical View Mode (image rotation by 90 degrees)
- Smart IR Mode
- Network Failure Detection
- True Day/Night (ICR)
- IR LED Module (working distance up to 25m)
- microSD Support
- ONVIF Support

1.2 Package Contents

Please check the package contains the following items listed below.

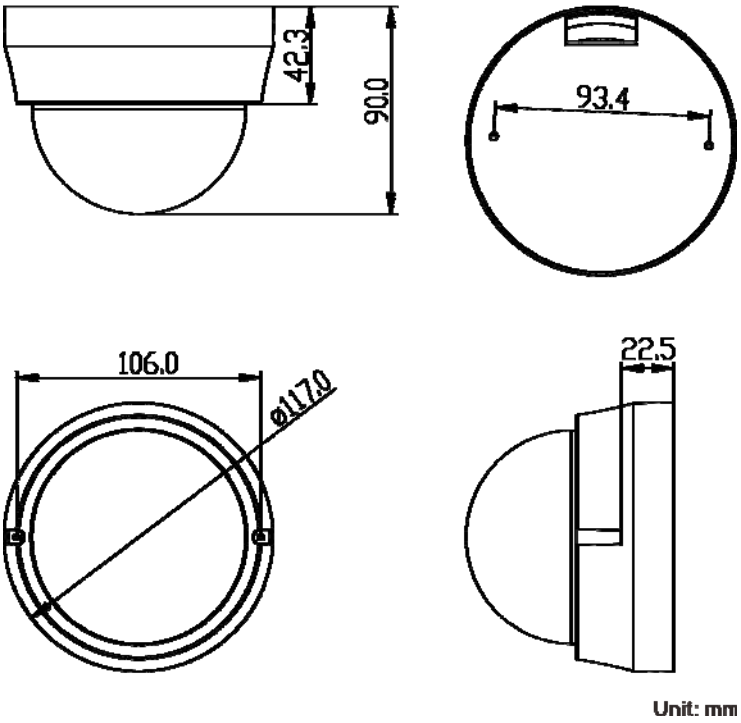
D224M HD Dome Camera

 D224M HD Dome Camera	 Power Terminal Block
 Self Tapping Screws (x3)	 Plastic Screw Anchors (x3)
 Quick Start Guide	 CD (bundled software and documentation)

1.3 Dimensions

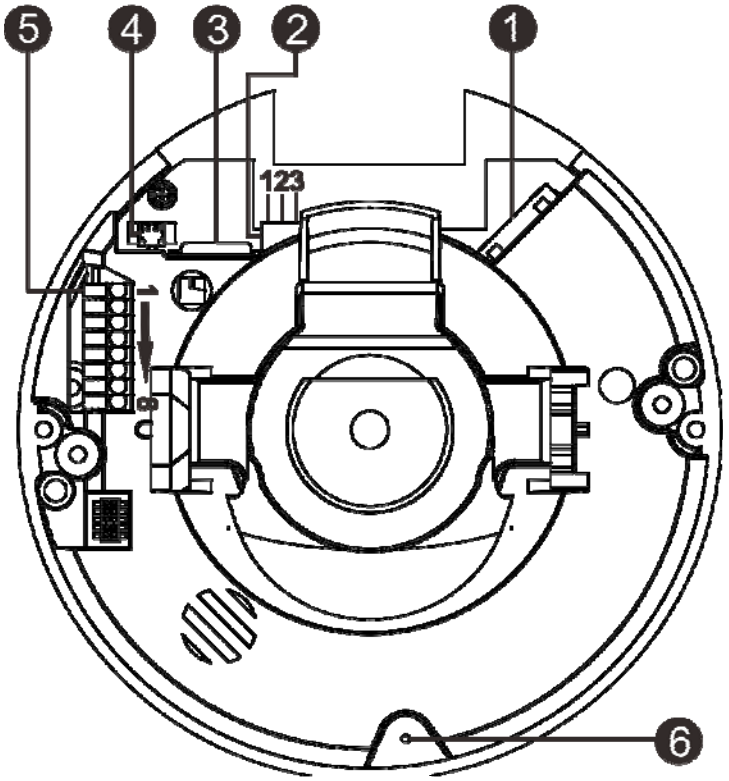
The dimensions of the IP Camera are shown below.

D224M



1.4 Connectors (Indoor Only)

The diagram below shows the IP Camera's reset button and various connectors. Definition for each connector will be given as follows.



No.	Connector	Pin	Definition		Remarks
1	**RJ-45**	-	10/100 Mbps Ethernet / PoE		
2	**Power (AC 24V / DC 12V)**	1	AC 24V: Power-1	DC 12V: Power	Power connection
		2	AC 24V: GND	DC 12V: Reserved	
		3	AC 24V: Power-2	DC 12V: GND	
3	**microSD Card Slot**	-	For video recording storage		
4	**--**	-	--		
5	**Alarm & Audio I/O**	1	Alarm In (–)		Alarm connection
		2	Alarm In (+)		
		3	Alarm Out (–)		
		4	Alarm Out (+)		
		5	Audio Out (L)		Line Out
		6	Audio Out (R)		
		7	GND		
		8	Audio In		Line In
6	**Default Button**	-	Press the button for at least 20 seconds with one finger to restore the system.		

NOTE: Insert the SD card into the microSD card slot before powering on the camera. If the camera is already powered on, reboot the camera after the SD card is inserted.

2. Camera Cabling

Please follow the instructions below to complete IP Camera connection.

2.1 Connect Power

For power connection, please refer to section Connectors. Alternatively, users can power the camera by PoE. Refer to the section below to connect the Ethernet Cable for PoE connection.

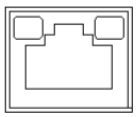
NOTE: If PoE is used, make sure Power Sourcing Equipment (PSE) is in used in the network.

2.2 Connect Ethernet Cable

Use of Category 5 Ethernet Cable is recommended for network / PoE connection. For best transmission quality, cable length shall not exceed 100 meters. Connect one end of the Ethernet Cable to the RJ-45 connector of the IP Camera / Function Cable, and plug the other end of the cable to the network switch or PC.

NOTE: In some cases, Ethernet Crossover Cable might be needed when connecting the IP Camera directly to the PC.

Check the status of the link indicator and activity indicator LEDs. If the LEDs are unlit, please check the LAN connection.



Green Link Light indicates good network connection.
Orange Activity Light flashes for network activity indication.

2.3 Connect Alarm I/O

For Indoor models, there is an 8 pins terminal block for the Alarm I/O and the Audio I/O connections. For Outdoor models, the Alarm I/O is connected by a 4 pins terminal block. Refer to sections Connectors for the pin definitions.

3. System Requirements

To perform the IP Camera via web browser, please ensure the PC is in good network connection, and meet system requirements as described below.

Items	System Requirement
Personal Computer	1. Intel® Pentium® M, 2.16 GHz or Intel® Core™2 Duo, 2.0 GHz 2. 2 GB RAM or more
Operating System	Windows VISTA / Windows XP / Windows 7
Web Browser	Microsoft Internet Explorer 6.0 or later Firefox Chrome Safari
Network Card	10Base-T (10 Mbps) or 100Base-TX (100 Mbps) operation
Viewer	ActiveX control plug-in for Microsoft IE

4. Access Camera

For initial access to the IP Camera, users can search the camera through the installer program: DeviceSearch.exe, which can be found in “DeviceSearch” folder in the supplied CD.

Accessing Device Search Software

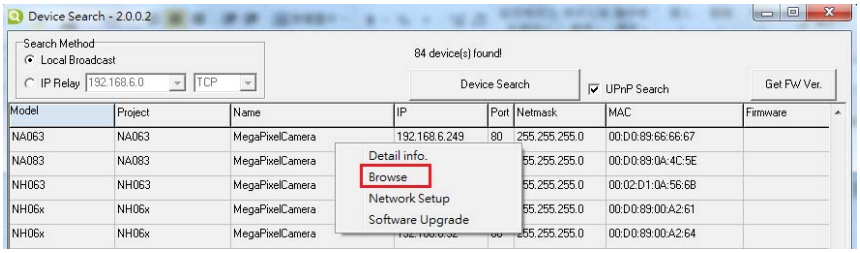
Step 1: Double click on the program Device Search.exe. After its window appears, click on the <Device Search> button on the top side.

Step 2: The security alert window will pop up. Click on <Unblock> to continue.

Device Search

Step 3: Click on <Device Search> again, and all the finding IP devices will be listed in the page. The IP Camera default IP setting is DHCP.

Step 4: Double click or right click and select <Browse> to access the camera directly via web browser.



Step 5: A prompt window requesting for default username and password will appear. Enter the default username and password shown below to login to the IP Camera.

Login ID	Password
Admin	1234

NOTE: ID and password are case sensitive.

NOTE: It is strongly advised that administrator’s password be altered for the security concerns. Refer to Camera Firmware Menu for further details.

Additionally, users can change the network property of the IP Camera to DHCP or Static IP directly in the device finding list. Refer to the following section for changing the IP Camera's network property.

Example of Changing IP Camera's Network Property

Step 1: In the finding device list, click on the IP Camera that is wished to change its network property. On the selected item, right click and select <Network Setup>. Meanwhile, record the IP Camera's MAC address, for future identification.

Step 2: The Network Setup page will come out. Select <DHCP>, and click <Apply> button down the page.

Step 3: Click on <OK> on the Note of setting change. Wait for one minute to re-search the IP Camera.

Step 4: Click on the <Device Search> button to re-search all the devices. Then select the IP Camera with the correct MAC address. Double click on the IP Camera, and the login window will come out.

Step 5: Enter Username and Password to access the IP Camera.

Installing Optica Viewer Software Online

For the initial access to the IP Camera, a client program, Optica Viewer, will be automatically installed to the PC when connecting to the IP Camera.

If the Web browser doesn't allow Optica Viewer installation, please check the Internet security settings or ActiveX controls and plug-ins settings (refer to chapter Appendix C: Setup Internet Security) to continue the process.

The Information Bar (just below the URL bar) may come out and ask for permission to install the ActiveX Control for displaying video in browser. Right click on the Information Bar and select <Install ActiveX Control…> to allow the installation.

The download procedure of Optica Viewer software is specified as follows.

Step 1: In the Optica Viewer installation window, click on <Next> to start the installation.

Step 2: The status bar will show the installation progress. After the installation is completed, click on <Finish> to exit the installation process.

Step 3: Click on <Finish> to close the Optica Viewer installation page.

Once the Optica Viewer is successfully installed, the Home page of the IP Camera will be shown as the figure below.

D224M Live View

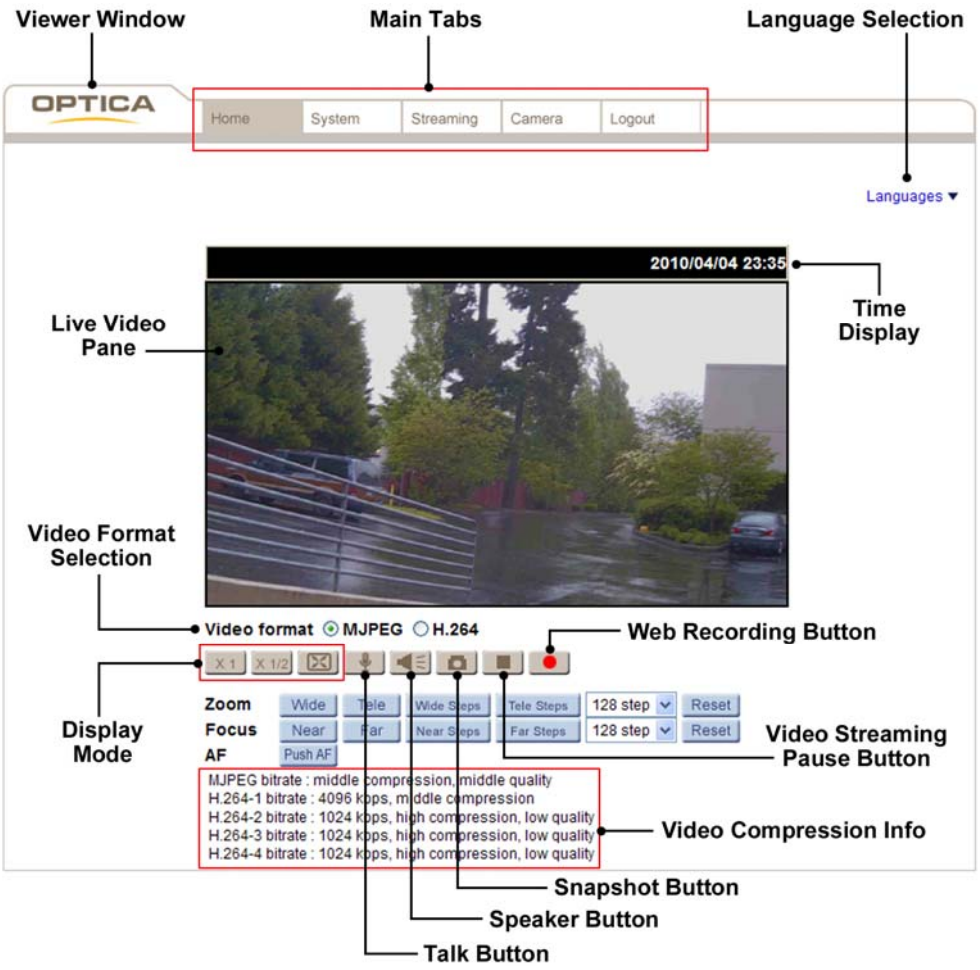


Image and Focus Adjustment

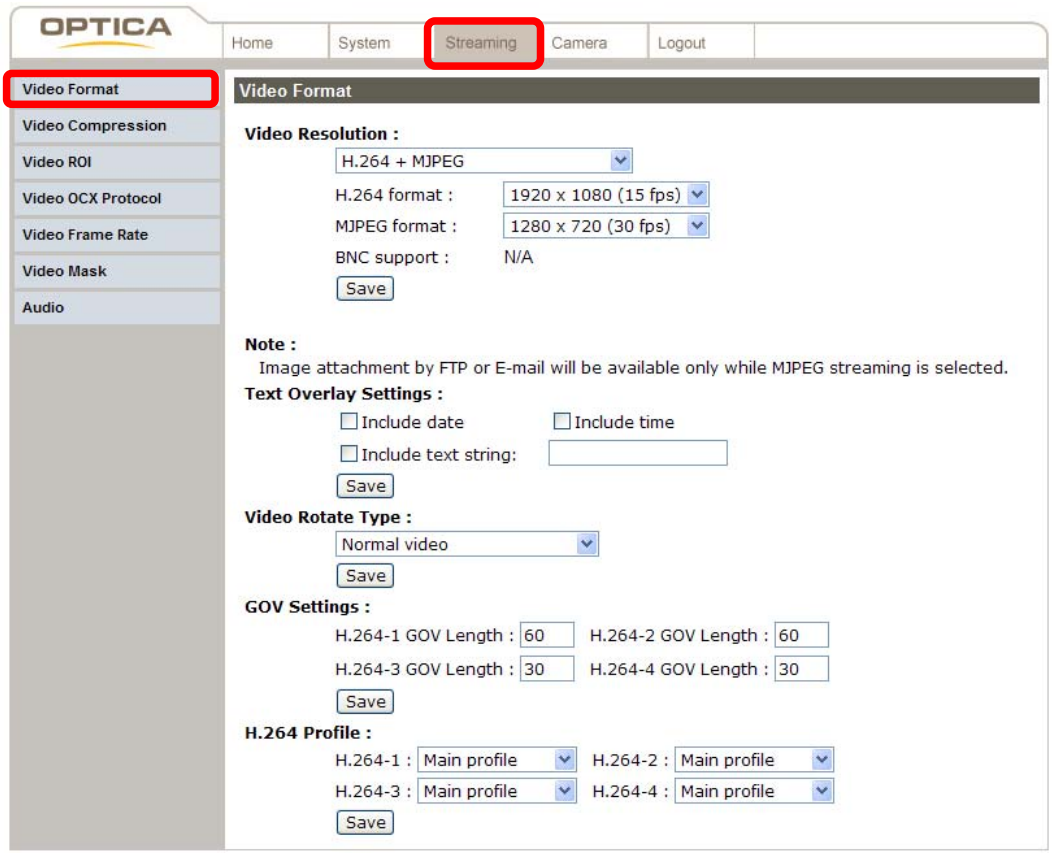
The image will be displayed on the Home page when the IP Camera is successfully accessed. Adjust the zoom and the focus as necessary to produce a clear image.

NOTE: Please refer to Camera Firmware Menu for more details about the function items on the Home page.

5. Setup Video Resolution

Users can setup Video Resolution on the Video Format page of the user-friendly browser-based configuration interface.

Video Format can be found under this path: **Streaming> Video Format**.



The default value of Video Resolution is as below.

D224M	H.264- 1920 x 1080 (30 fps) + MJPEG - 640 x 480 (30 fps)

For more Video Resolution combination details, please refer to chapter Appendix D: Video Resolution.

6. Configuration Files Export / Import

To export / import configuration files, users can access the Maintenance page on the user-friendly browser-based configuration interface.

The Maintenance setting can be found under this path: **System> Maintenance**.

Users can export configuration files to a specified location and retrieve data by uploading an existing configuration file to the IP Camera. This is especially convenient to make multiple cameras having the same configuration.

Export

Users can save the system settings by exporting the configuration file (.bin) to a specified location for future use. Click on the <Export> button, and the popup File Download window will come out. Click on <Save> and specify a desired location for saving the configuration file.

Upload

To upload a configuration file to the IP Camera, please first click on <Browse> to select the configuration file, and then click on the <Upload> button for uploading.

Appendix A: Technical Specifications

Camera		**D224M**
Image Sensor		1/2.8” Sony Progressive CMOS
Effective Pixels		1920 (H) x 1080 (V)
Minimum Illumination		TBD
Shutter Speed		1 ~ 1/10000 sec.
Lens		
Lens		Motorized
Focal Length		3.0 ~ 9.0 mm
F Number		F1.2 (Wide) ~ F2.7 (Tele)
Operation		
Multiple Languages		English / French / German / Italian / Japanese / Korean / Portuguese / Russian / Simplified Chinese / Spanish / Traditional Chinese
Image Setting	Backlight Compensation	On / Off
	White Balance	Auto / Manual / ATW
	Noise Reduction (3D)	On / Off
	Wide Dynamic Range	On / Off
	Privacy Mask	On / Off
	Brightness	Manual
	Exposure	Auto / Manual
	Sharpness	Manual
	Contrast	Manual
	Saturation	Manual
	Hue	Manual
	Digital Zoom	Support
	Motion Detection	On / Off / By Schedule
	Privacy Mask Type	Color
	ICR	Auto / On / Off / Smart
	ICR + IR LED	Auto / LED On / LED Off / Smart IR / Light Sensor
	Tampering Alarm	On / Off / By Schedule
Audio	Two-way Audio	Line In / Line Out
	Compression	G.711 / G.726
Network		
Interface		RJ-45, 10/100 Mbps Ethernet
Video Compression		H.264 / MJPEG
Video Streaming		Dual Streams- H.264 + H.264 / H.264 + MJPEG Quad Streams- H.264 x 4 / H.264 x 3 + MJPEG
Video Resolution		H.264- Full HD 1080P / SXGA / HD 720P / XGA / SVGA / D1 / VGA / CIF MJPEG- Full HD 1080P / SXGA / HD 720P / XGA / SVGA / D1 / VGA / CIF
Default Frame Rate		1080P (30/25 fps) + VGA (30/25 fps)
Protocol		IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, QoS, ONVIF
Security / Authorization		HTTPS / IP Filter / IEEE 802.1x
Alarm	Input	1 Set, 5V 10kΩ pull up
	Output	1 Set, Photo Relay Output 300V DC/AC
Event Notification		HTTP / FTP / SMTP
microSD		microSDHC 32GB support
Supported Web Browser		Internet Explorer (6.0+) / Chrome / Firefox / Safari
User Account		20
Password Levels		User and Administrator
Mechanical		
Built-in IR Illuminator	Working Distance	Up to 25 m
	Wavelength	850 nm
	Number of LEDs	24
LED Indicator		Power / Link / ACT
Connectors	Alarm	4 of 8 Pin Terminal Block (Female)
	Power	3 Pin Terminal Block
	Ethernet	RJ-45
	--	
	Audio	4 of 8 Pin Terminal Block (Female)

General		
Operating Temperature		-10°C ~ 50°C (14°F ~ 122°F)
Humidity		10% ~ 90%, No Condensation
Weatherproof Standard		Indoor Only
Dimension		ø 117.0 x 90.0 mm (ø 4.6 x 3.5 in.)
Weight		280 g
Power Source		DC 12V / AC 24V / PoE
Power Consumption	System	3.8 W
	Built-in IR Illuminator	1.5 W
	Motorized Lens	TBD
Regulatory		FCC / EMC / LVD / RoHS

Appendix B: Delete the Existing Optica Viewer

For users who have installed the Optica Viewer in the PC previously, please remove the existing Optica Viewer from the PC before accessing to the IP Camera.

Deleting the Optica Viewer

In the Windows <Start Menu>, activate <Control Panel>, and then double click on <Add or Remove Programs>. In the <Currently installed programs> list, select <DCViewer> and click on the button <Remove> to uninstall the existing Optica Viewer.

Deleting Temporary Internet Files

To improve browser performance, it is suggested to clean up all the files in the Temporary Internet Files. The procedure is as follows.

Step 1: In the web browser, clicks on the <Tools> tab on the menu bar and select <Internet Options>.

Step 2: Click on the <Delete> button under <Browsing history> section. In the appeared window, tick the box beside the <Temporary Internet files>.

Step 3: Click on <Delete> to start deleting the files.

Appendix C: Setup Internet Security

If ActiveX control installation is blocked, please either set Internet security level to default or change ActiveX controls and plug-ins settings.

Internet Security Level: Default

Step 1: Start the Internet Explorer (IE).

Step 2: Click on the <Tools> tab on the menu bar and select <Internet Options>.

Step 3: Click on the <Security> tab, and select <Internet> zone.

Step 4: Down the page, click on the <Default Level> button and click on <OK> to confirm the setting. Close the browser window, and restart a new one later to access the IP Camera.

ActiveX Controls and Plug-ins Settings

Step 1: Repeat **Steps 1 ~ 3** of the previous section above.

Step 2: Down the page, click on the <Custom Level> button to change ActiveX controls and plug-ins settings. The Security Settings window will pop up.

Step 3: Under <ActiveX controls and plug-ins>, set **ALL** items (as listed below) to <Enable> or <Prompt>. Please note that the items vary by IE version.

ActiveX controls and plug-ins settings:

1. Binary and script behaviors.
2. Download signed ActiveX controls.
3. Download unsigned ActiveX controls.
4. Allow previously unused ActiveX controls to run without prompt.
5. Allow Scriptlets.
6. Automatic prompting for ActiveX controls.
7. Initialize and script ActiveX controls not marked as safe for scripting.
8. Run ActiveX controls and plug-ins.
9. Only allow approved domains to use ActiveX without prompt.
10. Script ActiveX controls marked safe for scripting*.
11. Display video and animation on a webpage that does not use external media player.

Step 4: Click on <OK> to accept the settings. A prompt window will appear for confirming the setting changes, click <Yes(Y)> to close the Security Setting window.

Step 5: Click on <OK> to close the Internet Options screen.

Step 6: Close the browser window, and restart a new one later to access the IP Camera.

Appendix D: Video Resolution

D224M – Quad Streams

H.264 + H.264 + H.264 + H.264 / MJPEG			
H.264-1	**H.264-2**	**H.264-3**	**H.264-4 / MJPEG**
1920 x 1080 (15 fps)	1280 x 1024 (15 fps)	1280 x 720 (15 fps)	720 x 480 (15 fps)
			640 x 480 (15 fps)
			352 x 240 (30 fps)
		800 x 600 (15 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
		800 x 600 (30 fps)	352 x 240 (30 fps)
		720 x 480 (15 fps)	720 x 480 (30 fps)
		720 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	1280 x 720 (15 fps)	1280 x 720 (15 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		800 x 600 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
	1280 x 720 (30 fps)	720 x 480 (30 fps)	352 x 240 (30 fps)
		640 x 480 (30 fps)	352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	1024 x 768 (15 fps)	800 x 600 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
	1024 x 768 (30 fps)	800 x 600 (30 fps)	352 x 240 (30 fps)
		720 x 480 (30 fps)	352 x 240 (30 fps)
		640 x 480 (30 fps)	352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	800 x 600 (30 fps)	800 x 600 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	720 x 480 (30 fps)	720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	640 x 480 (30 fps)	640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
1920 x 1080 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)

H.264 + H.264 + H.264 + H.264 / MJPEG			
H.264-1	**H.264-2**	**H.264-3**	**H.264-4 / MJPEG**
1280 x 1024 (15 fps)	1280 x 1024 (15 fps)	1280 x 720 (15 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
		1280 x 720 (30 fps)	352 x 240 (30 fps)
		800 x 600 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
	1280 x 1024 (30 fps)	720 x 480 (30 fps)	352 x 240 (30 fps)
		640 x 480 (30 fps)	352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	1280 x 720 (15 fps)	1280 x 720 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
	1280 x 720 (30 fps)	800 x 600 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	1024 x 768 (30 fps)	800 x 600 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
	800 x 600 (30 fps)	800 x 600 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
1280 x 1024 (30 fps)	1024 x 768 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)
	800 x 600 (30 fps)	800 x 600 (30 fps)	352 x 240 (30 fps)
		720 x 480 (30 fps)	352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	720 x 480 (30 fps)	720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	640 x 480 (30 fps)	640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	352 x 240 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)
1280 x 720 (15 fps)	1280 x 720 (15 fps)	1280 x 720 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
	1280 x 720 (30 fps)	1280 x 720 (30 fps)	352 x 240 (30 fps)
		800 x 600 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
	1024 x 768 (30 fps)	800 x 600 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)

H.264 + H.264 + H.264 + H.264 / MJPEG			
H.264-1	**H.264-2**	**H.264-3**	**H.264-4 / MJPEG**
1280 x 720 (30 fps)	1280 x 720 (30 fps)	800 x 600 (30 fps)	352 x 240 (30 fps)
		720 x 480 (30 fps)	352 x 240 (30 fps)
		640 x 480 (30 fps)	352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	1024 x 768 (30 fps)	800 x 600 (30 fps)	352 x 240 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	800 x 600 (30 fps)	800 x 600 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	720 x 480 (30 fps)	720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	640 x 480 (30 fps)	640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	352 x 240 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)
1024 x 768 (30 fps)	1024 x 768 (30 fps)	800 x 600 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	800 x 600 (30 fps)	800 x 600 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	720 x 480 (30 fps)	720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	640 x 480 (30 fps)	640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	352 x 240 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)

H.264 + H.264 + H.264 + H.264 / MJPEG			
H.264-1	**H.264-2**	**H.264-3**	**H.264-4 / MJPEG**
800 x 600 (30 fps)	800 x 600 (30 fps)	800 x 600 (30 fps)	352 x 240 (30 fps)
		720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	720 x 480 (30 fps)	720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	640 x 480 (30 fps)	640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	352 x 240 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)
720 x 480 (30 fps)	720 x 480 (30 fps)	720 x 480 (30 fps)	720 x 480 (30 fps)
			640 x 480 (30 fps)
			352 x 240 (30 fps)
		640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	640 x 480 (30 fps)	640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	352 x 240 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)
640 x 480 (30 fps)	640 x 480 (30 fps)	640 x 480 (30 fps)	640 x 480 (30 fps)
			352 x 240 (30 fps)
		352 x 240 (30 fps)	352 x 240 (30 fps)
	352 x 240 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)
352 x 240 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)

D224M - Triple Streams

H.264-1 + H.264-2 + H.264-3 / MJPEG		
H.264-1	**H.264-2**	**H.264-3 / MJPEG**
1920 x 1080 (15 fps)	1280 x 1024 (15 fps)	1280 x 720 (15 fps)
		800 x 600 (30 fps)
		720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	1280 x 720 (15 fps)	1280 x 720 (30 fps)
		800 x 600 (30 fps)
	1280 x 720 (30 fps)	720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	1024 x 768 (30 fps)	800 x 600 (30 fps)
		720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	800 x 600 (30 fps)	800 x 600 (30 fps)
		720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	720 x 480 (30 fps)	720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	640 x 480 (30 fps)	640 x 480 (30 fps)
		352 x 240 (30 fps)
1920 x 1080 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)

H.264-1 + H.264-2 + H.264-3 / MJPEG		
H.264-1	**H.264-2**	**H.264-3 / MJPEG**
1280 x 1024 (15 fps)	1280 x 1024 (15 fps)	1280 x 720 (30 fps)
		800 x 600 (30 fps)
	1280 x 1024 (30 fps)	720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	1280 x 720 (15 fps)	1280 x 720 (30 fps)
	1280 x 720 (30 fps)	800 x 600 (30 fps)
		720 x 480 (30 fps)
		640 x 480 (30 fps)
	1024 x 768 (30 fps)	800 x 600 (30 fps)
		720 x 480 (30 fps)
1280 x 1024 (30 fps)	1280 x 720 (30 fps)	352 x 240 (30 fps)
	1024 x 768 (30 fps)	640 x 480 (30 fps)
		352 x 240 (30 fps)
	800 x 600 (30 fps)	800 x 600 (30 fps)
		720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	720 x 480 (30 fps)	720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	640 x 480 (30 fps)	640 x 480 (30 fps)
		352 x 240 (30 fps)
	352 x 240 (30 fps)	352 x 240 (30 fps)
1280 x 720 (15 fps)	1280 x 720 (30 fps)	1280 x 720 (30 fps)
1280 x 720 (30 fps)	1280 x 720 (30 fps)	800 x 600 (30 fps)
		720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	1024 x 768 (30 fps)	800 x 600 (30 fps)
		720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	800 x 600 (30 fps)	800 x 600 (30 fps)
		720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	720 x 480 (30 fps)	720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	640 x 480 (30 fps)	640 x 480 (30 fps)
		352 x 240 (30 fps)
	352 x 240 (30 fps)	352 x 240 (30 fps)
1024 x 768 (30 fps)	1024 x 768 (30 fps)	800 x 600 (30 fps)
		720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	800 x 600 (30 fps)	800 x 600 (30 fps)
		720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	720 x 480 (30 fps)	720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	640 x 480 (30 fps)	640 x 480 (30 fps)
		352 x 240 (30 fps)
	352 x 240 (30 fps)	352 x 240 (30 fps)

H.264-1 + H.264-2 + H.264-3 / MJPEG		
H.264-1	**H.264-2**	**H.264-3 / MJPEG**
800 x 600 (30 fps)	800 x 600 (30 fps)	800 x 600 (30 fps)
		720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	720 x 480 (30 fps)	720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	640 x 480 (30 fps)	640 x 480 (30 fps)
		352 x 240 (30 fps)
	352 x 240 (30 fps)	352 x 240 (30 fps)
720 x 480 (30 fps)	720 x 480 (30 fps)	720 x 480 (30 fps)
		640 x 480 (30 fps)
		352 x 240 (30 fps)
	640 x 480 (30 fps)	640 x 480 (30 fps)
		352 x 240 (30 fps)
	352 x 240 (30 fps)	352 x 240 (30 fps)
640 x 480 (30 fps)	640 x 480 (30 fps)	640 x 480 (30 fps)
		352 x 240 (30 fps)
	352 x 240 (30 fps)	352 x 240 (30 fps)
352 x 240 (30 fps)	352 x 240 (30 fps)	352 x 240 (30 fps)

D224M - Dual Streams

H.264-1 + H.264-2 / MJPEG		
H.264-1	**H.264-2 / MJPEG**	**BNC SUPPORT**
1920 x 1080 (15 fps)	1920 x 1080 (15 fps)	√
	1280 x 1024 (30 fps)	-
	1280 x 720 (30 fps)	-
	1024 x 768 (30 fps)	-
	800 x 600 (30 fps)	-
1920 x 1080 (30 fps)	720 x 480 (30 fps)	√
	640 x 480 (30 fps)	√
	352 x 240 (30 fps)	√
1280 x 1024 (30 fps)	1280 x 1024 (15 fps)	√
	1280 x 720 (30 fps)	-
	1024 x 768 (30 fps)	-
	800 x 600 (30 fps)	-
	720 x 480 (30 fps)	√
	640 x 480 (30 fps)	√
	352 x 240 (30 fps)	√
1280 x 720 (30 fps)	1280 x 720 (30 fps)	√
	1024 x 768 (30 fps)	-
	800 x 600 (30 fps)	-
	720 x 480 (30 fps)	√
	640 x 480 (30 fps)	√
	352 x 240 (30 fps)	√
1024 x 768 (30 fps)	1024 x 768 (30 fps)	√
	800 x 600 (30 fps)	-
	720 x 480 (30 fps)	√
	640 x 480 (30 fps)	√
	352 x 240 (30 fps)	√
800 x 600 (30 fps)	800 x 600 (30 fps)	√
	720 x 480 (30 fps)	√
	640 x 480 (30 fps)	√
	352 x 240 (30 fps)	√
720 x 480 (30 fps)	720 x 480 (30 fps)	√
	640 x 480 (30 fps)	√
	352 x 240 (30 fps)	√
640 x 480 (30 fps)	640 x 480 (30 fps)	√
	352 x 240 (30 fps)	√
352 x 240 (30 fps)	352 x 240 (30 fps)	-

D224M - Single Stream

H.264 Only	BNC SUPPORT
1920 x 1080 (30 fps)	√
1280 x 1024 (30 fps)	√
1280 x 720 (30 fps)	√
1024 x 768 (30 fps)	√
800 x 600 (30 fps)	√
720 x 480 (30 fps)	√
640 x 480 (30 fps)	√
352 x 240 (30 fps)	-

MJPEG Only	BNC SUPPORT
1920 x 1080 (30 fps)	√
1280 x 1024 (30 fps)	√
1280 x 720 (30 fps)	√
1024 x 768 (30 fps)	√
800 x 600 (30 fps)	√
720 x 480 (30 fps)	√
640 x 480 (30 fps)	√
352 x 240 (30 fps)	-